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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,815	02/14/2006	Seigo Kodama	126601	3390
25944	7590	09/06/2006	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			SHECHTMAN, SEAN P	
			ART UNIT	PAPER NUMBER
			2125	

DATE MAILED: 09/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/564,815		KODAMA ET AL.	
	Examiner		Art Unit	
	Sean P. Shechtman		2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>1/17/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 17-32 are presented for examination. Claims 1-16 have been cancelled.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 27 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 27 recites the limitation "said objection works" in line 5. There is insufficient antecedent basis for this limitation in the claim. Claim 28 recites the limitation "said objection works" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 17-22, 25-28, 31, 32, are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,093,794 to Howie et al (hereinafter referred to as Howie) in view of U.S. Pat. No. 6,459,946 to Villanova et al (hereinafter referred to as Villanova).

Referring to claims 17, 31, 32, Howie teaches a managing apparatus, program, medium for managing an assisting work to assist a substrate-related-operation performing system (Col. 18, line 48) comprising a plurality of operation performing machines (Col. 19, lines 59-66; Col. 6, lines 14-17), the assisting work being carried out, as needed, when the substrate-related operation performing system is operated, and comprising at least one of a supplying work to supply a material or a part which is consumed or worn during the substrate-related operation (Col. 5, lines 59-68), and a recovering work to remove a cause of a failure of at least one of operation performing machines (Col. 7, lines 6-12), the managing apparatus assigning, each time a need to carry out the assisting work occurs, the assisting work to one of a plurality of workers (Col. 19, lines 38 – Col. 20, line 62),

the managing apparatus comprising

an assisting-work occurrence information obtaining portion which obtains, from the operation performing machines, assisting-work occurrence information which is related to occurrence of a need to carry out at least one assisting work and which represents an object and a sort of said at least one assisting work and a time to carry out said at least one assisting work (Col. 6, lines 1-37; Col. 13, lines 56 – Col. 14, line 20); and

a worker determining portion which determines, based on the assisting-work occurrence information obtained by the assisting-work occurrence information obtaining portion, one of the workers who is appropriate to carry out said at least one assisting work as at least one objective work, so that said at least one objective work is assigned to said one worker (Col. 19, lines 38 – Col. 20, line 62).

18. The managing apparatus according to claim 17, wherein the worker determining portion comprises a pre-set-worker-information-dependent determining portion which determines said one worker based on a plurality of sets of pre-set worker information that are pre-set for the workers, respectively (Col. 20, lines 59-62).

19. The managing apparatus according to claim 18, wherein the pre-set-worker-information-dependent determining portion determines said one worker based on the sets of pre-set worker information each set of which comprises at least one of a worker skill level and a responsibility section of a corresponding one of the workers (Col. 20, lines 59-62).

20. The managing apparatus according to claim 17, further comprising a current-worker-information obtaining portion which obtains a plurality of sets of current worker information representing respective current states of the workers, wherein the worker determining portion comprises a current-worker-information-dependent determining portion which determines said one worker based on the obtained sets of current worker information (Col. 20, line 67 – Col. 21, line 7).

21. The managing apparatus according to claim 20, wherein the current-worker-information-dependent determining portion determines said one worker based on the sets of current worker information each set of which comprises at least one of a working state (Col. 21,

lines 6-7), a position around the substrate-related-operation performing system, an amount of work, and an assignment state of a corresponding one of the workers.

22. The managing apparatus according to claim 17, wherein the worker determining portion comprises a worker-intention-dependent determining portion which determines said one worker based on an intention of said one worker (Col. 20, lines 59-62).

25. The managing apparatus according to claim 17, wherein the worker determining portion determines said one worker at a time determined based on a time when said at least one objective work is carried out (Col. 6, lines 1-37; Col. 13, lines 56 – Col. 14, line 20).

26. The managing apparatus according to claim 17, wherein the assisting-work occurrence information obtaining portion obtains a plurality of sets of said assisting-work occurrence information which are related to a plurality of assisting works, respectively, wherein the worker determining portion determines, in an order of priority of the assisting works, the workers who carry out the assisting works, respectively (Col. 6, lines 1-37; Col. 13, lines 56 – Col. 14, line 20; Col. 7, lines 1-5).

27. The managing apparatus according to claim 17, wherein the assisting-work occurrence information obtaining portion obtains a plurality of sets of said assisting-work occurrence information which are related to a plurality of assisting works, respectively, wherein the worker determining portion comprises a related-work-related determining portion which determines, as a plurality of said objective works, a plurality of related works which are related to each other on carrying-out of the works, and determines said one worker who carries out the related works (Col. 20, lines 46-47).

28. The managing apparatus according to claim 17, wherein the assisting-work occurrence information obtaining portion obtains a plurality of sets of said assisting-work occurrence information which are related to a plurality of assisting works, respectively, wherein the worker determining portion comprises a simultaneous-work-related determining portion which determines, as a plurality of said objective works, a plurality of simultaneous works which are preferred to be carried out simultaneously with each other, and determines the workers who carry out the simultaneous works, respectively (Col. 20, lines 46-47).

Referring to claims 17, 31, Howie teaches all of the limitation set forth above however fails to teach a plurality of substrate-related-operation performing machines each of which performs a substrate-related operation related to a circuit substrate.

However, Villanova teaches analogous art wherein a plurality of substrate-related-operation performing machines each performs a substrate-related operation that is related to a circuit substrate (Col. 1, lines 32-50; Col. 4, lines 13-38).

Therefore it would have been obvious to one of ordinary skill in the art at the time that the invention was made to combine the teachings of Villanova with Howie.

One of ordinary skill in the art would have been motivated to combine these references because Villanova teaches the fabrication processes performed at various processing stations, e.g. group of machines, are able to mass produce integrated circuits. Furthermore, Villanova teaches a method and system for quickly and continuously determining a total number of operators needed at a work center to achieve a manufacturing goal (Col. 2, lines 12-17).

5. Claims 23, 24, 29, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howie in view of Villanova as applied to claims 17-22, 25-28, 31, 32 above, and further in view of U.S. Pat. No. 6,417,760 Mabuchi et al (hereinafter referred as Mabuchi).

Referring to claim 23, Howie teaches a worker-intention-information obtaining portion which obtains, from at least one worker, at least one set of worker intention information representing the intention of said at least one worker about whether said at least one worker carries out said at least one objective work (Col. 20, lines 59-62).

Referring to claim 24, Howie teaches the worker-intention-dependent determining portion further comprises a candidate selecting portion which selects, from the workers, at least one candidate who can carry out said at least one objective work (Col. 6, lines 1-37; Col. 13, lines 56 – Col. 14, line 20).

Referring to claims 23, 24, 29, 30, Howie teaches all of the limitation set forth above however fails to teach a worker-intention-dependent determining portion comprises a pending-work-related informing portion which informs each of at least one of the workers of at least one objective work which has not been assigned, and wherein the pending-work-related informing portion informs each of said at least one candidate selected by the candidate selecting portion, of said at least one objective work; further comprising an assigned-work-related informing portion which informs said one worker determined by the worker determining portion, of said at least one objective work assigned to said one worker; further comprising a plurality of portable terminal devices which can be carried by the workers, respectively, wherein the managing apparatus sends, and receives, information to, and from, the portable terminal devices carried by the workers.

Referring to claims 23, 24, 29, 30, Mabuchi teaches analogous art, wherein a worker-intention-dependent determining portion comprises a pending-work-related informing portion which informs each of at least one of the workers of at least one objective work which has not been assigned, and wherein the pending-work-related informing portion informs each of said at least one candidate selected by the candidate selecting portion, of said at least one objective work; further comprising an assigned-work-related informing portion which informs said one worker determined by the worker determining portion, of said at least one objective work assigned to said one worker; further comprising a plurality of portable terminal devices which can be carried by the workers, respectively, wherein the managing apparatus sends, and receives, information to, and from, the portable terminal devices carried by the workers (Col. 16, lines 7-13; Col. 22, lines 19-29; Col. 16, lines 41-45).

Therefore it would have been obvious to one of ordinary skill in the art at the time that the invention was made to further modify the teachings of Howie with Mabuchi.

One of ordinary skill in the art would have been motivated to combine these references because Mabuchi teaches a maintenance/inspection support apparatus which can provide sufficient and accurate inspection information to a worker, and omit a work of preparing an operation tag for each maintenance/inspection operation and hanging the operation tag on an on-site equipment, thereby improving work efficiency (Col. 3, line 66 – Col. 4, line 7).

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean P. Shechtman whose telephone number is (571) 272-3754. The examiner can normally be reached on 9:30am-6:00pm, M-F.

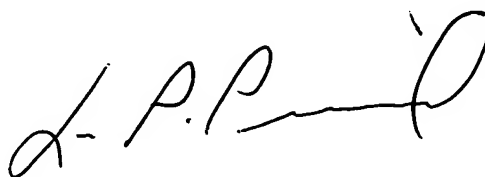
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P. Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SPS

Sean P. Shechtman

September 1, 2006

A handwritten signature in black ink, appearing to read "L. P. Picard", with a stylized flourish at the end.

LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100